

Sphingosine Kinase 1 (SPK1) Blocking Peptide

Catalog # PBV10408b

Specification

Sphingosine Kinase 1 (SPK1) Blocking Peptide - Product Information

Primary Accession	Q8CI15
Other Accession	CAM17115
Gene ID	20698
Calculated MW	42443

Sphingosine Kinase 1 (SPK1) Blocking Peptide - Additional Information

Gene ID 20698

Application & Usage

The peptide is used for blocking the antibody activity of Sphingosine Kinase 1. It usually blocks the antibody activity completely in Western blot analysis by incubating the peptide with equal volume of antibody for 30-60 minutes at 37°C.

Other Names

Sphingosine kinase 1, SK 1, SPK 1, 2.7.1.91, Sphk1

Target/Specificity

Sphingosine Kinase 1 (SPK1)

Formulation

50 µg (0.5 mg/ml) in phosphate buffered saline (PBS), pH 7.2, containing 50% glycerol, 1% BSA and 0.02% thimerosal.

Reconstitution & Storage

-20 °C

Background Descriptions

Precautions

Sphingosine Kinase 1 (SPK1) Blocking Peptide is for research use only and not for use in diagnostic or therapeutic procedures.

Sphingosine Kinase 1 (SPK1) Blocking Peptide - Protein Information

Name Sphk1 {ECO:0000312|MGI:MGI:1316649}

Function

Catalyzes the phosphorylation of sphingosine to form sphingosine 1-phosphate (SPP), a lipid mediator with both intra- and extracellular functions (PubMed:17346996, PubMed:21084291, PubMed:25417698, PubMed:29662056, PubMed:33334894). Also acts on D- erythro-sphingosine and to a lesser extent sphinganine, but not other lipids, such as D,L-threo-dihydrosphingosine, N,N-dimethylsphingosine, diacylglycerol, ceramide, or phosphatidylinositol (PubMed:9726979). In contrast to proapoptotic SPHK2, has a negative effect on intracellular ceramide levels, enhances cell growth and inhibits apoptosis (PubMed:16118219). Involved in the regulation of inflammatory response and neuroinflammation. Via the product sphingosine 1-phosphate, stimulates TRAF2 E3 ubiquitin ligase activity, and promotes activation of NF-kappa-B in response to TNF signaling (By similarity). In response to TNF and in parallel to NF-kappa-B activation, negatively regulates RANTES induction through p38 MAPK signaling pathway (By similarity). Involved in endocytic membrane trafficking induced by sphingosine, recruited to dilate endosomes, also plays a role on later stages of endosomal maturation and membrane fusion independently of its kinase activity (PubMed:27806293, PubMed:28049734). In Purkinje cells, seems to be also involved in the regulation of autophagosome-lysosome fusion upon VEGFA (PubMed:25417698).

Cellular Location

Cytoplasm. Endosome membrane; Peripheral membrane protein. Nucleus. Cell membrane {ECO:0000250|UniProtKB:Q9NYA1}. Synapse Note=Translocated from the cytoplasm to the plasma membrane in a CIB1- dependent manner. Binds to membranes containing negatively charged lipids but not neutral lipids (By similarity). Recruited to endocytic membranes by sphingosine where promotes membrane fusion (PubMed:27806293). {ECO:0000250|UniProtKB:Q9NYA1, ECO:0000269|PubMed:27806293}

Tissue Location

Widely expressed (PubMed:9726979). Expressed in brain (at protein level). Detected in neurons

Sphingosine Kinase 1 (SPK1) Blocking Peptide - Protocols

Provided below are standard protocols that you may find useful for product applications.

- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

Sphingosine Kinase 1 (SPK1) Blocking Peptide - Images